

IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1 – 16 (Canceled)

17. (PREVIOUSLY PRESENTED) A method of making a size composition for the surface sizing of paper, board and the like, comprising the steps of:

- (1) forming a pigment fraction by premixing together (a) a mineral material, which mainly comprises talc particles and/or other phyllosilicate particles, and (b) a binder; and thereafter
- (2) mixing a size fraction comprised of a water-soluble principal component, and the pigment fraction to thereby form the size composition

18. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the size fraction comprises a surface size.

19. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the water-soluble principal component includes starch, polyvinyl alcohol, carboxymethyl cellulose, glucomannan, protein, or mixtures thereof.

20. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the binder includes a synthetic polymer and/or a latex.

21. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the size composition is prepared by mixing the pigment fraction into the size fraction.

22. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the size composition is prepared by mixing the size fraction into the pigment fraction.

23. (CURRENTLY AMENDED) A method according to Claim 17, wherein the size fraction comprises at least one additional component selected from the group consisting of a mineral material, a hydrophobification agent, and an anti-foaming agent ~~and salts~~.

24. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the principal component of the size fraction is starch, polyvinyl alcohol and/or carboxymethyl cellulose.

25. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the mineral material of the pigment fraction is phyllosilicate having a purity degree of 90 -100 % and a particle size of 90 % below 40 μm .

26. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein
the mineral material of the pigment fraction comprises talc particles, and
the proportion of talc particles of the mineral material is at least 50 %.

27. (PREVIOUSLY PRESENTED) A method according to Claim 26, wherein the proportion of talc particles of the mineral material is >90 %.

28. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein
- the mineral material of the pigment fraction comprises talc particles, and
- the proportion of talc, calculated as dry matter, of the amount of the pigment fraction is >10 %

29. (PREVIOUSLY PRESENTED) A method according to Claim 28, wherein the proportion of talc is >30 %.

30. (PREVIOUSLY PRESENTED) A method according to Claim 28, wherein the proportion of talc is >50 %.

31. (PREVIOUSLY PRESENTED) A method according to Claim 28, 29 or 30, wherein the proportion of talc is <95 %.

32. (PREVIOUSLY PRESENTED) A method according to Claim 28, 29 or 30 wherein the proportion of talc is <85 %.

33. (PREVIOUSLY PRESENTED) A method according to Claim 28, 29 or 30 wherein the proportion of talc is <70 %.

34. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the ratio of the pigment fraction to the size fraction, calculated as dry matter, is 10/90 — 90/10

35. (PREVIOUSLY PRESENTED) A method according to Claim 34, wherein the ratio of the pigment fraction to the size fraction, calculated as dry matter, is 20/80 — 80/20.

36. (PREVIOUSLY PRESENTED) A method according to Claim 34, wherein the ratio of the pigment fraction to the size fraction, calculated as dry matter, is 20/80 — 50/50.

37. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the binder in the pigment fraction is a synthetic polymer.

38. (PREVIOUSLY PRESENTED) A method according to Claim 37, wherein the synthetic polymer is styrene butadiene, acrylate, styrene acrylate or polyvinylacetate latex.

39. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the binder in the pigment fraction is:

- (1) a polymer which contains styrene or butadiene as its principal component,
- (2) a polymer which contains as its principal components monomers which contain an acryl or allyl group, wherein the monomers may additionally contain acid or ester groups, or may be amides of acrylic or metacrylic acid or derivatives thereof, and/or
- (3) a polymer which contains as its principal components vinyl ester monomers.

40. (PREVIOUSLY PRESENTED) A method according to Claim 39, wherein the said monomers include:

- an n-, iso- or tert-alkyl ester of acrylic or metacrylic acid, where the alkyl group comprises 1 —20 carbon atoms,
- a diester of acrylic or metacrylic acid and ethylene or propylene glycol as a crosslinking component;
- allylglycidyl ether or diacetone acrylamide as a crosslinking component; or
- 2-acrylamido-2-methylpropane sulfonic acid as an ionicity-increasing component.

41. (PREVIOUSLY PRESENTED) A method according to claim 39, wherein the polymer which contains a vinyl ester monomers as its principal components is vinyl acetate, vinyl propionate, vinyl butyrate, vinyl benzoate, vinyl-2-ethyl hexanoate, vinyl stearate and vinyl esters of versatinic acid.

42. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the binder in the pigment fraction is a biodegradable compound.

43. (CURRENTLY AMENDED) A method according to claim 42, wherein the biodegradable compound is selected from:

- polymers based on starch, lactic acid and polyhydroxybutyrate/valerate, ~~or~~ and
- polyesters of various organic di- or tri-acids with alcohols having functionality of two or higher.

44. (PREVIOUSLY PRESENTED) A method according to Claim 43, wherein the organic di- or tri-acid is adipic, maleic or citric acid, and the alcohol having functionality of two or higher is ethylene, propylene and neopentyl glycol, pentarythritol or glycerol.

45. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the binder in the pigment fraction comprises a graft copolymer of a starch and a synthetic monomer.

46. (PREVIOUSLY PRESENTED) A method according to Claim 17, wherein the ready-made, pre-mixed pigment fraction further comprises a hydrophobification agent in an amount sufficient to achieve a desired liquid absorption in the surface-sized paper, board or the like.

47. (WITHDRAWN) A size composition for the surface sizing of paper, board and the like, the size composition comprising a mixture of (A) a size fraction, and (B) a ready-made, pre-mixed pigment fraction in a ratio of the pigment fraction to the size fraction of from 10/90 to 35/65, wherein

said size fraction, comprises a water-soluble principal component, and
said pigment fraction is formed by pre-mixing together

- (a) a mineral material, which mainly comprises talc particles and/or other phyllosilicate particles, and
- (b) a binder,

wherein the proportion of talc in the pigment fraction is less than 85%,
calculated as dry matter.

48. (WITHDRAWN) A size composition according to Claim 47, wherein the size fraction comprises a surface size.

49. (WITHDRAWN) A size composition according to Claim 47, wherein the water-soluble principal component includes starch, polyvinyl alcohol, carboxymethyl cellulose, glucomannan, protein, or mixtures thereof.

50. (WITHDRAWN) A size composition according to Claim 47, wherein the binder includes a synthetic polymer and/or a latex.

51. (WITHDRAWN) A size composition according to Claim 47, wherein the size composition is prepared by mixing the pigment fraction into the size fraction.

52. (WITHDRAWN) A size composition according to Claim 47, wherein the size composition is prepared by mixing the size fraction into the pigment fraction.

53. (WITHDRAWN) A size composition according to Claim 47, wherein the size fraction comprises at least one additional component selected from the group consisting of a mineral material, a hydrophobification agent, an anti-foaming agent, and salts.

54. (WITHDRAWN) A size composition according to Claim 47, wherein the principal component of the size fraction is starch, polyvinyl alcohol and/or carboxymethyl cellulose.

55. (WITHDRAWN) A size composition according to Claim 47, wherein the mineral material of the pigment fraction is phyllosilicate having a purity degree of 90 -100 % and a particle size of 90 % below 40 μm .

56. (WITHDRAWN) A size composition according to Claim 47, wherein
the mineral material of the pigment fraction comprises talc particles, and
the proportion of talc particles of the mineral material is at least 50 %.

57. (WITHDRAWN) A size composition according to Claim 47, wherein the proportion of talc particles of the mineral material is >90%.

58. (WITHDRAWN) A size composition according to Claim 47, wherein
- the mineral material of the pigment fraction comprises talc particles, and
- the proportion of talc, calculated as dry matter, of the amount of the pigment fraction is >10 %

59. (WITHDRAWN) A size composition according to Claim 58, wherein the proportion of talc is >30 %.

60. (WITHDRAWN) A size composition according to Claim 58, wherein the proportion of talc is >50 %.

61. (WITHDRAWN) A size composition according to Claim 58, 59 or 60, wherein the proportion of talc is <70 %.

62. (WITHDRAWN) A size composition according to Claim 47, wherein the binder in the pigment fraction is a synthetic polymer.

63. (WITHDRAWN) A size composition according to Claim 62, wherein the synthetic polymer is styrene butadiene, acrylate, styrene acrylate or polyvinylacetate latex.

64. (WITHDRAWN) A size composition according to Claim 47, wherein the binder in the pigment fraction is:

- (1) a polymer which contains styrene or butadiene as its principal component,
- (2) a polymer which contains as its principal components monomers which contain an acryl or allyl group, wherein the monomers may additionally contain acid or ester groups, or may be amides of acrylic or metacrylic acid or derivatives thereof, and/or
- (3) a polymer which contains as its principal components vinyl ester monomers.

65. (WITHDRAWN) A size composition according to Claim 64, wherein the said monomers include:

- an n-, iso- or tert-alkyl ester of acrylic or metacrylic acid, where the alkyl group comprises 1 —20 carbon atoms,
- a diester of acrylic or metacrylic acid and ethylene or propylene glycol as a crosslinking component;
- allylglycidyl ether or diacetone acrylamide as a crosslinking component; or
- 2-acrylamido-2-methylpropane sulfonic acid as an ionicity-increasing component.

66. (WITHDRAWN) A size composition according to claim 64, wherein the polymer which contains a vinyl ester monomers as its principal components is vinyl acetate, vinyl propionate, vinyl butyrate, vinyl benzoate, vinyl-2-ethyl hexanoate, vinyl stearate and vinyl esters of versatinic acid.

67. (WITHDRAWN) A size composition according to Claim 47, wherein the binder in the pigment fraction is a biodegradable compound.

68. (WITHDRAWN) A size composition according to claim 67, wherein the biodegradable compound is selected from:

- polymers based on starch, lactic acid and polyhydroxybutyrate/valerate, or
- polyesters of various organic di- or tri-acids with alcohols having functionality of two or higher.

69. (WITHDRAWN) A size composition according to Claim 68, wherein the organic di- or tri-acid is adipic, maleic or citric acid, and the alcohol having functionality of two or higher is ethylene, propylene and neopentyl glycol, pentarythritol or glycerol.

70. (WITHDRAWN) A size composition according to Claim 47, wherein the binder in the pigment fraction comprises a graft copolymer of a starch and a synthetic monomer.

71. (WITHDRAWN) A size composition according to Claim 47, wherein the ready-made, pre-mixed pigment fraction further comprises a hydrophobification agent in an amount sufficient to achieve a desired liquid absorption in the surface-sized paper, board or the like.